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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/720,304	11/24/2003	Kazem Memarzadeh	A-9574	4129

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SCIENTIFIC-ATLANTA, INC. INTELLECTUAL PROPERTY DEPARTMENT 5030 SUGARLOAF PARKWAY LAWRENCEVILLE, GA 30044

EXAMINER
LEE, BETTY E

ART UNIT	PAPER NUMBER
2616	

NOTIFICATION DATE	DELIVERY MODE
05/29/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PTOmail@sciatl.com

	Application No.	Applicant(s)
Office Action Summary	10/720,304	MEMARZADEH ET AL.
	Examiner	Art Unit	
	Betty Lee	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _24 November 2003_.

2a)☐ This action is **FINAL.**   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under _Ex parte Quayle_, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-12_ is/are pending in the application.

　　4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-12_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _24 November 2003_ is/are: a)☒ accepted or b)☐ objected to by the Examiner.

　　Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

　　Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

　　a)☐ All　b)☐ Some * c)☐ None of:

　　　1.☐ Certified copies of the priority documents have been received.

　　　2.☐ Certified copies of the priority documents have been received in Application No. _____.

　　　3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

　　* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO/SB/08)
　　Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
　　Paper No(s)/Mail Date. _____ .
5)☐ Notice of Informal Patent Application
6)☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

2.   The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

    1.   Determining the scope and contents of the prior art.
    2.   Ascertaining the differences between the prior art and the claims at issue.
    3.   Resolving the level of ordinary skill in the pertinent art.
    4.   Considering objective evidence present in the application indicating
            obviousness or nonobviousness.

3.   This application currently names joint inventors. In considering patentability of

the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of

the various claims was commonly owned at the time any inventions covered therein

were made absent any evidence to the contrary. Applicant is advised of the obligation

under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g)

prior art under 35 U.S.C. 103(a).

4.   Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Kangas (US 2005/0152546) in view of Onvural et al. (US 2002/0150115) and in view of

Vermola et al. (US 2005/0090235).

Regarding claim 1 and 4, Kangas teaches a receive processor for receiving the

plurality of packets, wherein each packet has a packet identifier (see paragraph 45 line

7); buffers for receiving and buffering the plurality of packets, wherein each packet is

provided to one of the buffers according to a specific program (see Fig. 2 Boxes 201

and 202); a packet processor for retrieving each buffered packet from the buffers (see

Fig. 2 Box 207); queues for queuing the retrieved packet, wherein each retrieved packet

is provided to one of the queues according to the specific program (see Fig. 2 Boxes

201 and 202); and a queue manager for controlling the output of each packet from the

time-sliced queues (see Fig. 2 Box 208), and for providing the packets to the receiving

devices, wherein the queue manager, upon removing a packet from one of the queues,

notifies the packet processor to retrieve and place a next packet having a common

program identifier as the removed packet (see Fig. 2 Box 213 and 214). Kangas

teaches all the subject matter of the claimed invention with the exception of using time-

sliced queues as the output queues and outputting the packet depending upon its

egress time.

Onvural teaches outputting the packet depending upon its egress time (see

paragraph 23 lines 2-5). Thus, it would have been obvious to one of ordinary skill to

use the system of Onvural in the system of Kangas. The motivation for doing so is to

output the packets in the correct order depending on the output time. Kangas in view of

Onvural teaches all the subject matter of the claimed invention with the exception of a

time-sliced queue.

Vermola teaches a time-slice queue (see paragraph 40 lines 6-11). Thus, it

would have been obvious to one of ordinary skill in the art to use the time-slice queue of

Vermola as the output queue of Kangas. The motivation for using the time-slice queue

is that it ensures the output is a constant bit stream.

Regarding claim 2, Kangas further teaches the packet processor receives the

program identifier of the removed packet and searches the buffers for a buffered packet

having the common program identifier (see paragraph 73 lines 1-4; The Output Buffer

Control controls the filling status of the buffers and also sorts the packets into the output

buffers depending on the PID.).

Regarding claim 3, Kangas further teaches the receive processor receives a

packet having a new program identifier that is indicative of a new program, the receive

processor provides a new-program signal to the packet processor (see paragraph 48

lines 3-7; Since the PID is a unique identifier, if a new packet identifier is received, then

a new program is transmitted and information must be sent to update the program

association table.).

Regarding claim 4, Kangas teaches all the subject matter of the claimed

invention with the exception of placing the packet into the queue depending on egress

time. Onvural teaches depending upon the egress time, places the packet into an index

of the queue (see Onvural paragraph 23 lines 2-5). Thus, it would have been obvious to

one of ordinary skill to use the system of Onvural in the system of Kangas. The

motivation for doing so is to output the packets in the correct order depending on the

output time. Kangas in view of Onvural teaches all the subject matter of the claimed

invention with the exception of a time-sliced queue.

Vermola teaches a time-slice queue (see paragraph 40 lines 6-11). Thus, it

would have been obvious to one of ordinary skill in the art to use the time-slice queue of

Vermola as the output queue of Kangas. The motivation for using the time-slice queue

is that it ensures the output is a constant bit stream.

Regarding claim 5, Kangas further teaches a null packet is used to maintain

flow of each program when there are no packet available in the buffers for that program

(see paragraph 113 lines 5-7).

Regarding claim 6, Kangas teaches buffering the plurality of jittered packets,

each jittered packet buffered in one of a plurality of buffers according to a specific

program (see Fig. 2 Boxes 201 and 202); retrieving each buffered packet from the

plurality of buffers depending upon a program identifier identifying the specific program

(see Fig. 2 Box 207); queuing the retrieved packets in one of a plurality of queues

according to the specific program (see Fig. 2 Box 209 and 210); removing the queued

packets according to the program identifier (see paragraph 74 lines 1-5), wherein upon

removing a packet, providing a packet-sent signal in order to retrieve a next buffered

packet having a common program identifier with the removed packet (see Fig. 2 Boxes

208, 213, 214; The Output Buffer Control controls the filling status of the buffers and

also sorts the packets into the output buffers depending on the PID.). Kangas teaches

all the subject matter of the claimed invention with the exception of Kangas teaches all

the subject matter of the claimed invention with the exception of using time-sliced

queues as the output queues and outputting the packet depending upon its egress time.

Onvural teaches outputting the packet depending upon its egress time (see

paragraph 23 lines 2-5). Thus, it would have been obvious to one of ordinary skill to

use the system of Onvural in the system of Kangas. The motivation for doing so is to

output the packets in the correct order depending on the output time. Kangas in view of

Onvural teaches all the subject matter of the claimed invention with the exception of a

time-sliced queue.

Vermola teaches a time-slice queue (see paragraph 40 lines 6-11). Thus, it

would have been obvious to one of ordinary skill in the art to use the time-slice queue of

Vermola as the output queue of Kangas. The motivation for using the time-slice queue

is that it ensures the output is a constant bit stream.

Regarding claim 7, Kangas teaches all the subject matter of the claimed

invention with the exception of using an index in the queue. Onvural teaches

determining an index into the queue based on the output time (see paragraph 24 lines

10-12); and placing a packet descriptor that is indicative of the buffered packet into the

determined index (see paragraph 24 lines 16-17). Thus, it would have been obvious to

one of ordinary skill to use the system of Onvural in the system of Kangas. The

motivation for doing so is to output the packets in the correct order depending on the

output time. Kangas in view of Onvural teaches all the subject matter of the claimed

invention with the exception of a time-sliced queue.

Vermola teaches a time-slice queue (see paragraph 40 lines 6-11). Thus, it would have been obvious to one of ordinary skill in the art to use the time-slice queue of Vermola as the output queue of Kangas. The motivation for using the time-slice queue is that it ensures the output is a constant bit stream.

Regarding claim 8, Kangas teaches a plurality of queues for different programs in a video system (see Fig. 2 Boxes 201 and 202). Kangas teaches all the subject matter of the claimed invention with the exception of the packet scheduling method using output times and time-sliced queues.

Onvural teaches retrieving an appropriate output time for each data packet (see paragraph 23 lines 2-5); determining an index into a queue based on the data packet output time (see paragraph 24 lines 10-12); placing a packet descriptor that is indicative of the data packet in the queue based on the index (see paragraph 24 lines 16-17); removing the packet descriptor from the queue during a time that matches a time in the queue in which the packet descriptor was placed; and transmitting the data packet (see paragraph 24 lines 12-15). Thus, it would have been obvious to one of ordinary skill to use the system of Onvural in the system of Kangas. The motivation for doing so is to output the packets in the correct order depending on the output time. Kangas in view of Onvural teaches all the subject matter of the claimed invention with the exception of a time-sliced queue.

Vermola teaches a time-slice queue (see paragraph 40 lines 6-11). Thus, it would have been obvious to one of ordinary skill in the art to use the time-slice queue of

Vermola as the output queue of Kangas. The motivation for using the time-slice queue

is that it ensures the output is a constant bit stream.

Regarding claim 9, Kangas further teaches a new stream signal is used to

trigger a beginning packet flow for a particular stream (see paragraph 49 lines 1-4; If a

new unique packet identifier is received, that signals the beginning of a packet flow for

the new stream.).

Regarding claim 10, Kangas in view of Onvural and Vermola further teaches a

packet-sent signal is used to trigger placing a next packet in one of the plurality of time-

sliced queues for a particular stream (see Fig. 2 Box 209 and 210; The Output Buffer

Control sorts the packets into the output buffers depending on the PID.).

Regarding claim 11, Kangas further teaches a special null packet is used to

maintain flow of a stream during times when no data packets are available in a buffer for

that particular stream (see paragraph 113 lines 5-7).

Regarding claim 12, Kangas further teaches the data packets are one of an

MPEG encoded video, audio, and data packets (see paragraph 45 line 1).
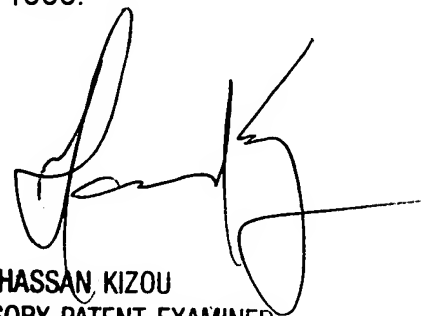
Conclusion

5.   The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure. Rosengard et al. (US 2004/0022260) and Tash (US 7,036,138)

are all cited to show systems which are considered pertinent to the claimed invention.

6.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Betty Lee whose telephone number is (571) 270-1412. The examiner can normally be reached on Monday-Thursday 9-5 EST and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on (571) 272-3088. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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